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[54] MODIFIED CONCENTRIC SPECTROGRAPH

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[58] Field of Search 356/326, 328,
356/330-334; 385/37

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[57] ABSTRACT

A modified concentric spectrograph for diffracting light with high stray light rejection without astigmatism is provided. The modified spectrograph includes a grating, a lens, and at least one entrance port and one exit port. The grating has a concave surface and a meridian plane with a first side and a second side. The lens has a substantially planar surface and a convex surface. Preferably, the convex and concave surfaces are substantially concentric. The ports are substantially located on different sides of the meridian plane near a focal plane of the spectrograph. The position of a focal plane may be modified using an optically transmissive triangular prism with a reflective surface, and an optically transmissive block. The position of a focal plane may further be modified with one or more optically transmissive plates. Methods for using the spectrograph are also provided.

83 Claims, 7 Drawing Sheets

